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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,083	06/25/2001	Hisaki Miyamoto	P20983	8590

7055 7590 07/31/2003

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EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 07/31/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/887,083

Applicant(s)

MIYAMOTO ET AL.

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/147,140.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1) Figures 11-20 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Figures 11-20 are admitted prior art in view of the following:

- (1) Figures 11-20 are described in the "BACKGROUND TECHNOLOGY";
  - (2) after describing figures 11-20, applicant refers to "the above-described deficiencies of conventional optical disc lamination methods" (spec pages 10-11);
  - (3) in "BRIEF DESCRIPTION OF THE DRAWINGS", applicant states "Fig. 20 is a flow chart showing a conventional optical disc laminating method based on a spin coating technique" (spec page 13); and
  - (4) with respect to figure 12, applicant states "Description of the printing method and apparatus is omitted because these are known to public" (spec page 35).
- 2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 3) Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the scope of the claimed apparatus is unclear since the preamble describes "laminated optical disc manufacturing apparatus" whereas the body of the claim fails to describe a "laminating means". As a related matter, it is unclear which device / means results in "forming an adhesive layer having a specific thickness between the first substrate and a second substrate

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superimposed onto the first substrate". If the forming of an adhesive between the substrates is performed by the adhesive applying device instead of a laminating means / superimposing device, then does claim 1 require injection of the adhesive between the substrates so as to form the adhesive between the substrates and thereby exclude the process outlined in figure 2 of applicant's disclosure? In short, does claim 1 require a superimposing device? If not, why not?

As to claim 3, it is unclear what additional limitation of the apparatus is being claimed.

As to claim 4, it is unclear what additional limitation of the apparatus is being claimed.

In claim 6, it is unclear how "wherein the second substrate is superimposed onto the first substrate by contacting the top edge of the annular mound with the second substrate" affects the scope of the claim. Is a superimposing device required? If not, why not?

As to claim 8, it is unclear if the provisional bonding device of claim 2 and the warping prevention device of claim 8, which also provisionally bonds, are the same device or different devices.

In claim 14, the scope of the method is unclear because the scope of "applying an adhesive to a first substrate to form an adhesive layer having a specific thickness between the first substrate and a second substrate superimposed onto the first substrate; superimposing the second substrate onto the first substrate" is unclear. It is unclear if the above language requires injecting the adhesive between the substrates so as to exclude the process as outlined in figure 2. In other words, it is unclear if claimed specific thickness is determined by the step of applying of adhesive (as indicated by the literal language of claim 14) or the step of superimposing (as described in the specification)..

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4) Claims 3 and 4 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 3 and 4 fail to further limit apparatus claim 1 since claims 3 and 4 merely describe the product worked upon (the type of adhesive to be used) instead of an additional limitation of the apparatus.

5) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6) **Claims 1, 3, 4 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Japan '234 (JP 4-57234).**

Japan '234 discloses a method and apparatus for making a laminated optical disc. Substrates 2, 4 are bonded together with adhesive. One of ordinary skill in the art would readily understand that an "adhesive applying device" is used to provide the adhesive coated substrates 2, 4. In other words, the claimed "adhesive applying device" is inherent in Japan '234. Japan '234 discloses a centering device for aligning the substrates. Japan '234's centering device comprises two "pins" (divided shaft members 18 and 20) which move in opposite directions to simultaneously engage the inner diameter of holes 12a, 14a. The claimed centering device reads on the centering device shown by Japan '234 in figures 1-2.

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7) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8) **Claims 1, 3, 4, 6, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Japan '234 (JP 4-57234) and Japan '242 (JP 61-292242).**

Europe '178, directed to method and apparatus for making a laminated optical disc, discloses providing a first disc and a second disc, applying adhesive in a donut shape to the first disc, superimposing the second disc on the first disc, rotating the discs to spread the adhesive and subjecting the adhesive to UV to cure the adhesive. See figures 3A, 3B, 3C and 3D and description thereof. The adhesive is applied using a "adhesive applying device" which is schematically illustrated in figure 3A. The second disc is superimposed on the first disc by a "superimposing means" (e.g. robot 41, transporter 45). See figure 4 and description thereof. Europe '178 does not recite a centering device.

As to claims 1 and 14, it would have been obvious to one of ordinary skill in the art to center the discs using the claimed centering cylinder with at least two pins in Europe '178's process / apparatus of manufacturing a laminated optical disc in view of Japan '234 and Japan '242's suggestion to using centering means comprising movable "pins" to accurately align discs to be laminated to form a laminated optical disc.

As to claims 3 and 4, note Europe '178's teaching to apply the adhesive using an adhesive applying means as shown in figure 3A. Europe '178 teaches that the adhesive is UV curable.

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As to claim 6, the limitation of spreading the claimed annular mound of adhesive would have been obvious in view of Europe '178's teaching to spread a donut of adhesive.

As to claim 16, note Europe '178's teaching to cure the adhesive. Claim 16 reads on curing all of the adhesive instead of only at a location in proximity to the hole.

9) **Claims 2, 7, 8, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Japan '234 (JP 4-57234) and Japan '242 (JP 61-292242) as applied above and further in view of Japan '630 (JP 4-139630).**

As to claims 2, 7, 8, 15-17, it would have been obvious to provide Europe '178's optical disc laminating method / apparatus, which has a bonding device (UV source), with the claimed provisional bonding device / warping prevention device since Japan '630, also directed to making a laminated optical disc, suggests tentatively fixing discs before final bonding by applying UV through transparent parts 5b of the device indicated in figure 1(3) to prevent generation of focusing and tracking defect.

10) **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Japan '234 (JP 4-57234) and Japan '242 (JP 61-292242) as applied above and further in view of Komori et al (US 5227213).**

As to claim 4, it would have been obvious to adapt the apparatus to apply a thermoplastic adhesive in view of Europe '178's teaching to apply a UV curable adhesive to form a laminated optical disc and Komori et al's teaching to use a hot melt (thermoplastic) UV curable adhesive to form a laminated optical disc.

11) **Claims 6, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Japan '234 (JP 4-57234) and Japan '242 (JP 61-292242)**

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**as applied above and further in view of at least one of Japan '713 (JP 5-20713), Japan '940 (JP 62-12940) and Japan '786 (JP 8-36786).**

As to claim 6, the limitation of spreading the claimed annular mound of adhesive would have been obvious as noted above in view of Europe '178's teaching to spread a donut of adhesive. This conclusion is optionally further supported by Japan '786's teaching to spread an annular mound of adhesive as shown in figures 1-2.

As to claims 12 and 18, it would have been obvious to one of ordinary skill in the art to suction the adhesive between the discs with a predetermined suction force in the method / apparatus of making a laminated optical disc of Europe '178 in view of at least one of Japan '713, Japan '940 and Japan '786's teaching to apply suction to adhesive between discs during manufacture of a laminated optical disc in order to decrease bubbles / prevent adhesive from oozing over the surface of the disc. Japan '713 applies suction during rotating of the discs using a suction device as shown in figure 4 to decrease bubbles. Japan '940 applies suction using a suction device as shown in figure 1 to prevent adhesive from extending over the surface of the disc. Japan '786 applies suction as indicated in figures 1 or 2 to eliminate bubbles.

**12) Claims 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Japan '234 (JP 4-57234) and Japan '242 (JP 61-292242) and further in view of at least one of Japan '713 (JP 5-20713), Japan '940 (JP 62-12940) and Japan '786 (JP 8-36786) as applied above and further in view of Japan '630 (JP 4-139630).**

As to claims 13 and 19, it would have been obvious to provide Europe '178's optical disc laminating method / apparatus, which has a bonding device (UV source), with the claimed



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provisional bonding device / warping prevention device since Japan '630, also directed to making a laminated optical disc, suggests tentatively fixing discs before final bonding by applying UV through transparent parts 5b of the device indicated in figure 1(3) to prevent generation of focusing and tracking defect.

**13) Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Japan '234 (JP 4-57234) and Japan '242 (JP 61-292242) as applied above and further in view of the Komori et al (US 5227213), and admitted prior art (specification page 7 lines 12-15) or Japan '212 (JP 60-125212).**

As to claim 9, it would have been obvious to use an adhesive supply source to supply the adhesive at the claimed first temperature T1 to the adhesive applying device since (a) Europe '178 teaches applying a UV curable adhesive to the disc using the adhesive applying means and (b) Komori et al, also directed to making a laminated optical disc, suggests heating a UV curable hot melt adhesive to a temperature T of 80-160 °C so that the adhesive has a suitable viscosity for application to the disc. Furthermore, it would have been obvious to use a defoaming device to defoam the adhesive at the claimed second temperature T2 in view of either the admitted prior art's teaching to defoam UV curable adhesive using a defoaming tank during the manufacture of a laminated optical disc or Japan '212's suggestion to defoam UV resin for use in optical disc apparatus using a tank. The limitation of  $T2 > T1$  would have been obvious and could have been determined without undue experimentation in view of the combined teachings of the above noted applied prior art to heat the adhesive so that it can be applied at a suitable viscosity and to defoam the adhesive - only the expected results (depositing of a defoamed adhesive ready for subsequent spreading across the disc) being obtained.

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As to claims 10 and 11, it would have been obvious to use an adhesive recovery tank and filter as claimed in view of the admitted prior art's teaching to recycle the adhesive using an adhesive recovery tank and to filter the adhesive using a filter.

14) **Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Japan '234 (JP 4-57234), Japan '242 (JP 61-292242) and Komori et al (US 5227213), and admitted prior art (specification page 7 lines 12-15) or Japan '212 (JP 60-125212) as applied above and further in view of Achilles et al (US 5518569) and Anderson (US 4850425).**

As to claims 10 and 11, it would have been obvious to use an adhesive recovery tank and filter as claimed since it is well known in the bonding art to recycle adhesive as evidenced by Achilles et al in order to reduce waste and to filter adhesive using a filter as evidenced by Anderson in order to remove contaminant(s).

obvious type double patenting

15) In parent application, a restriction was made between A (Group I), B (Group II), C (Group III), and D (Group IV) and applicant had elected A (Group I). Claim 1 of this application is directed to D (Group IV). However: No restriction was made between DA and AD. No restriction was made between DB and BD. No restriction was made between DC and CD.

16) The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17) **Claim 5 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-10 of U.S. Patent No. 6309485.** Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 5 of this application fails to exclude the superimposing device required by claims 9-10 of US 6309485.

18) **Claim 9 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-11 of copending Application No. 09/887081.** Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 9 of this application fails to exclude the spreading device, suction device and provisional bonding device required by claims 10-11 of copending 09/887081.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

19) **Claims 10 and 11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 10-11 of copending Application No. 09/887081 in view of the admitted prior art (specification page 9 lines 3-8) or Achilles et al (US 5518569) and Anderson (US 4850425).**

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The limitations of claims 10 and 11 of this application would have been obvious in view of the laminated optical disc manufacturing apparatus of claims 10-11 of copending 09/887081 which includes an adhesive applying device and either (a) the admitted prior art's teaching to recycle the adhesive using an adhesive recovery tank and to filter the adhesive using a filter or (b) it is well known in the bonding art to recycle adhesive as evidenced by Achilles et al in order to reduce waste and to filter adhesive using a filter as evidenced by Anderson in order to remove contaminant(s).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

20) **Claims 12-13 and 18-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-8 and 17-18 of copending Application No. 09/887082 in view of Japan '234 (JP 4-57234) and Japan '242 (JP 61-292242) and optionally Japan '630 (JP 4-139630).** As to claims 12 and 18 of this application, it would have been obvious to provide the pins of the centering cylinder of claims 7 and 17 of copending 09/887082 such that they simultaneously contact since Japan '234 and Japan '242 suggest centering through the use of "pins" which simultaneously contact. The limitation of provisionally bonding / fastening as in claims 13 and 19 of this application would have been obvious in view of (1) claim 7 of copending 09/887082 which recites a provisional bonding device and optionally (b) Japan '630's suggestion to tentatively fix discs before final bonding by applying UV through transparent parts 5b of the device indicated in figure 1(3) to prevent generation of focusing and tracking defect.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

21) **Claim 5 would be allowable if (1) rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims and (2) the obvious type double patenting rejection is overcome with a proper terminal disclaimer.**

Remarks

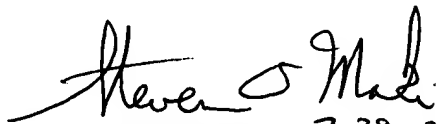
22) The remaining references are of interest.

23) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki  
July 28, 2003

  
STEVEN D. MAKI  
PRIMARY EXAMINER  
-GROUP 1300  
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7-28-03